

Cable Assemblies

PhaseTite®

Reliable, Repeatable
Performance

Capabilities

- Low loss design
- DC – 40 GHz, 3 cable options
- SMA, N, TNC, 2.92 mm connectors
- Low profile design for tight installation spaces
- Weather sealed

Polytetrafluoroethylene (PTFE) has been considered the best dielectric material option for coax cables. Our DynaCore® PS dielectric technology eliminates the dramatic phase shift that occurs with PTFE material over temperature.

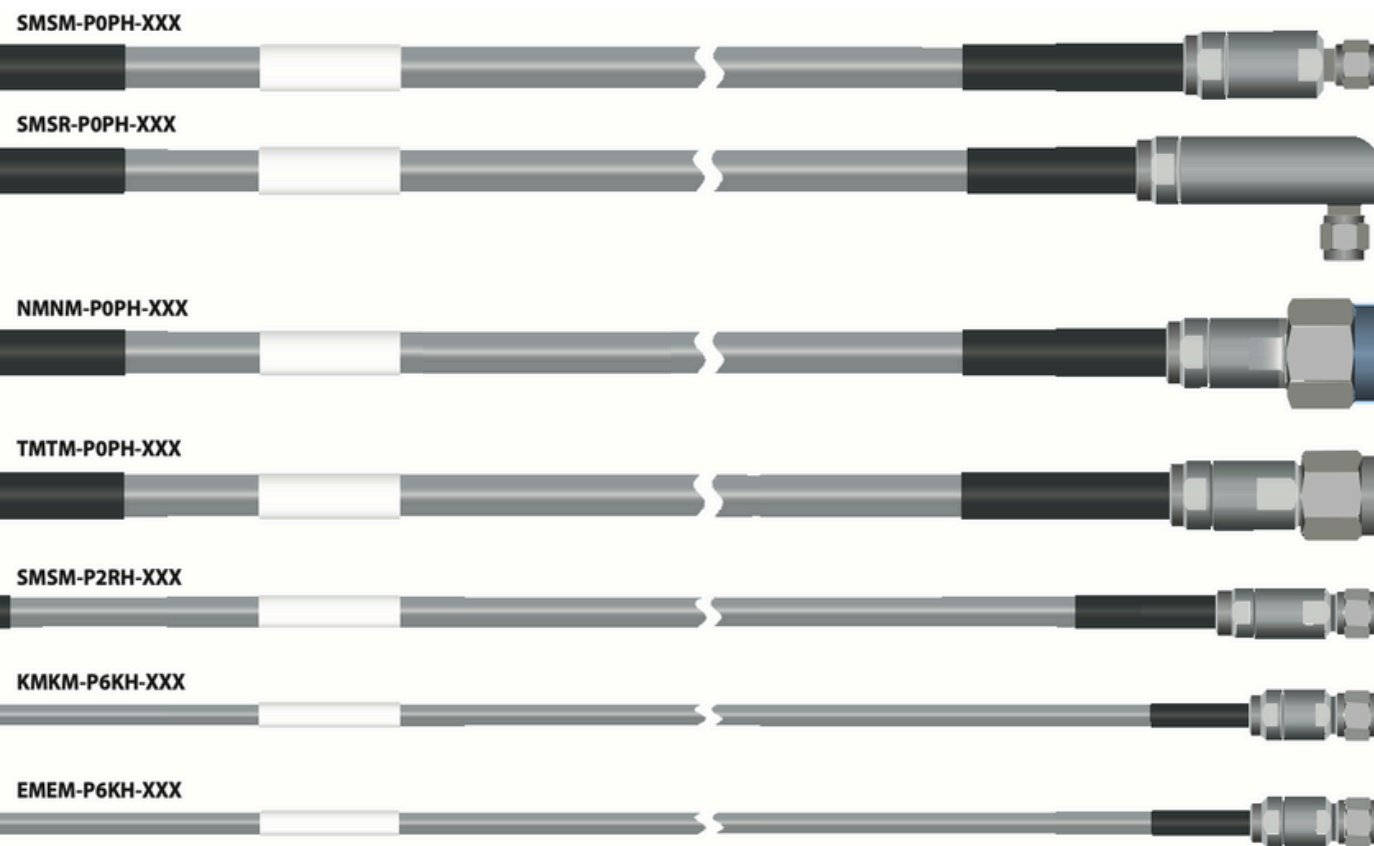
PhaseTite® cable assemblies provide breakthrough phase stability versus temperature performance. However, PTFE demonstrates a troublesome phenomenon known as the “PTFE Knee.” The PTFE dielectric causes an abrupt shift in phase stability between 0° and +20° C. To eliminate this problem Winchester Interconnect developed a proprietary dielectric material, DynaCore® PS, which significantly reduces the “PTFE Knee” problem and makes PhaseTite® the best cable choice for military and commercial radar applications where phase stability over temperature is critical for system performance.

SPECIFICATIONS

	PhaseTite 18		PhaseTite 26		PhaseTite 40	
Frequency (max)	18 GHz		26 GHz		40 GHz	
Impedance	50 Ohms		50 Ohms		50 Ohms	
Operating Temperature	-65°C to +125°C		-65°C to +125°C		-65°C to +125°C	
Velocity of Propagation	82%		82%		82%	
VSWR (max)	1.30:1		1.35:1		1.40:1	
Attenuation (max)	dB/ft	dB/m	dB/ft	dB/m	dB/ft	dB/m
0.5 GHz	0.03	0.10	0.05	0.17	0.07	0.23
1 GHz	0.05	0.13	0.07	0.23	0.11	0.37
3 GHz	0.10	0.33	0.13	0.43	0.20	0.63
6 GHz	0.15	0.50	0.20	0.67	0.29	0.97
12 GHz	0.24	0.80	0.31	1.03	0.44	1.47
18 GHz	0.32	1.07	0.40	1.33	0.56	1.87
26GHz	-	-	0.52	1.73	0.71	2.37
40 GHz	-	-	-	-	0.93	3.10
Phase vs Flexure	°C		°C		°C	
10 GHz	1.5		1.5		1.5	
18 GHz	2.7		2.7		2.7	
26 GHz	3.0		3.0		3.0	
40 GHz	6.0		6.0		6.0	
Phase vs Temp (0°C to 40°C)	5 PPM/°C Typ		5 PPM/°C Typ		5 PPM/°C Typ	
Shielding Effectiveness (min)	-90 dB		-90 dB		-90 dB	
Connector Retention (min)	30 lbs (13.6 kg)		30 lbs (13.6 kg)		30 lbs (13.6 kg)	

SPECIFICATIONS CONT.

	PhaseTite 18	PhaseTite 26	PhaseTite 40
Outer Cable Diameter (nom)	0.302 inch (7.67 mm)	0.217 inch (5.51 mm)	0.153 inch (3.89 mm)
Minimum Bend Radius	1.51 inch (38.35 mm)	1.08 inch (27.43 mm)	0.76 inch (19.30 mm)
Thermal Shock	MIL-STD-202, method 107, condition B-3		
Mechanical Shock	MIL-STD-202, method 213, condition F		
Sinusoidal Vibration	MIL-STD-202, method 104, condition G		
Random Vibration	MIL-STD-202, method 214, condition K		



MATERIAL AND FINISH

Cable Jacket	Fluoroplastic, type IX (per ASTM D2116) or type X (per ASTM D3159)
Cable Dielectric	DynaCore® expanded PTFE, Type F (per ASTM D4894 & D4895)
First Shield	Silver plated copper (per ASTM B298)
Secondary Shield	High temperature, aluminum polyimide foil
Third Shield	Silver plated copper (per ASTM B298)
Cable Center Conductor	Solid, silver plated copper (per ASTM B298)
Strain Relief Shrink Boots	Polyolefin (per M23053)
Connector Housing	Passivated stainless steel (per ASTM-A-582, type 303)
Connector Dielectric	PTFE (per ASTM-D-1710-02 or polystyrene/polyethylene thermoplastic)
Connector Center Contacts	BeCu, gold plated (per ASTM-B-488, type 1)

About Winchester Interconnect

Winchester Interconnect is a US-based manufacturer of high-precision connectors, cable assemblies, and cable. Our products are ideal for military and aerospace, industrial, medical, and space applications where expertise and reliability are critical to your success.

Our 30,000+ connectivity solutions include standard and custom RF and microwave interconnects, hermetic connectors and packaging, micro-miniature connectors and assemblies, fiber optic connectors, industrial cable, and undersea cable

We work in the toughest industries where failure is not an option. For connectivity applications requiring high performance in harsh environments, life-saving systems, and the latest connected technologies, our industry-leading knowledge and engineering capabilities will ensure reliable, cutting-edge interconnect solutions that won't fail when it matters most.

Our Industries & Market Solutions



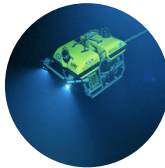
Robotics
AMRs



Entertainment



Oil & Gas



Marine
Subsea



Aerospace
Defense



Rail Mass
Transit



Medical



Custom